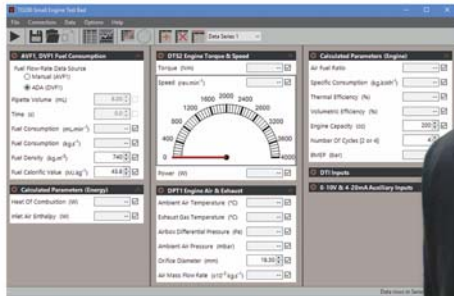


SMALL ENGINE TEST SET

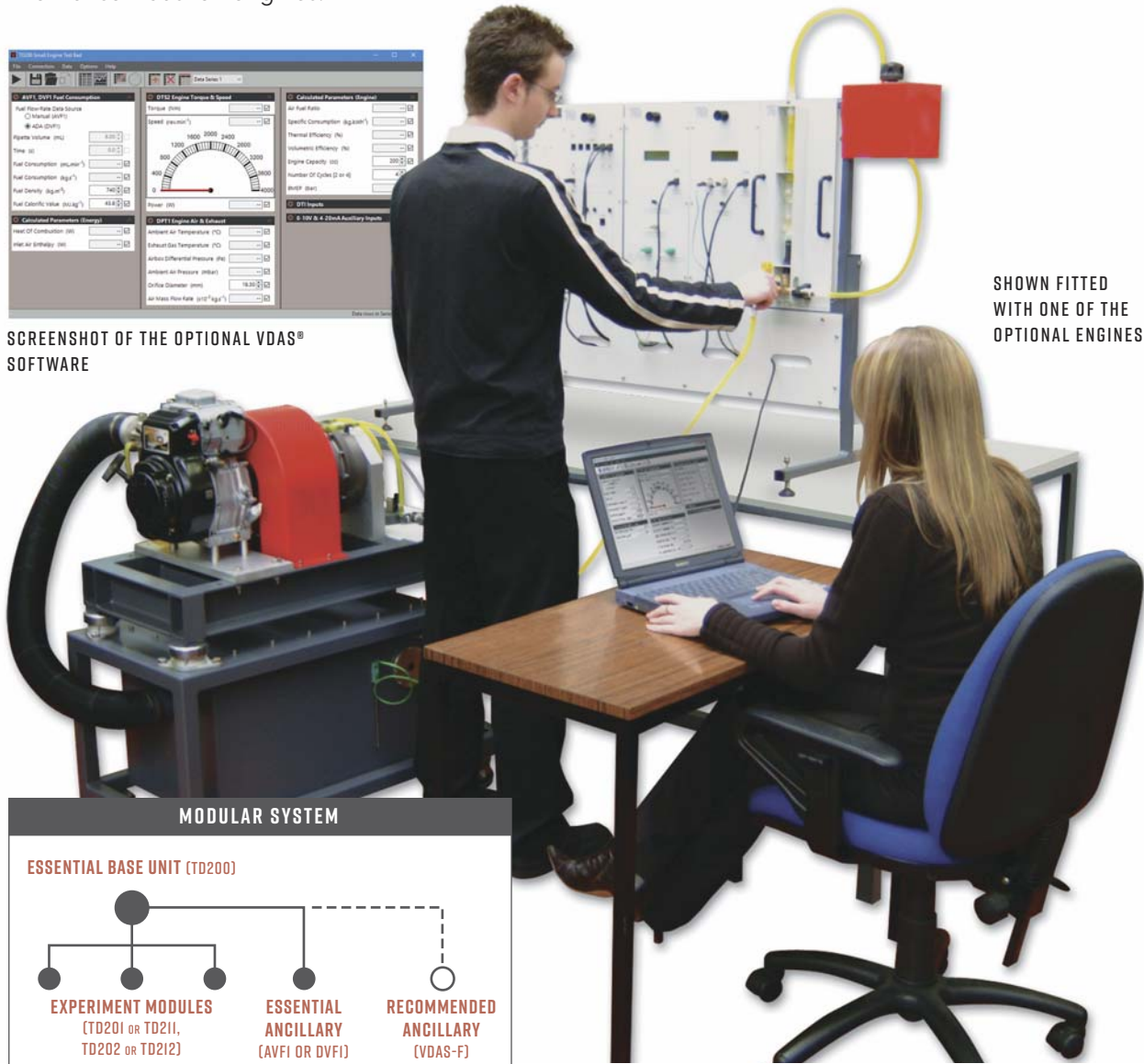
VDAS® TD200

Versatile engine test bed and instrumentation for investigations into the fundamental features of internal combustion engines.



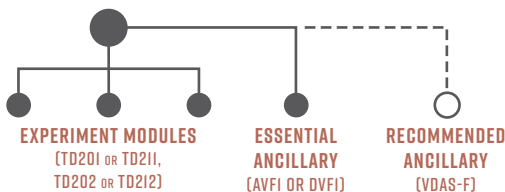
SCREENSHOT OF THE OPTIONAL VDAS® SOFTWARE

SHOWN FITTED WITH ONE OF THE OPTIONAL ENGINES



MODULAR SYSTEM

ESSENTIAL BASE UNIT (TD200)



FEATURES:

Fully equipped test set that supports a choice of internal combustion engines

Optional petrol and diesel engines

Several engine and instrument options

Separate instruments and test bed

Robust, simple hydraulic dynamometer

Easy set-up – it takes minutes to remove and fit an engine

Works with VDAS®

BENEFITS:

➔ Saves space and reduces costs

➔ Allows comparative tests of different engines

➔ Expands the range of studies

➔ Avoids transmission of vibration to give accurate, repeatable results

➔ Reliability and long life

➔ Maximises experiment time

➔ Quick and reliable tests with data capture

CONTINUED ON NEXT PAGE



LEARNING OUTCOMES:

A comprehensive range of investigations into the features of single-cylinder, four-stroke petrol and diesel engines including:

- Torque, speed and power relationship
- Brake mean effective pressure
- Engine performance curves
- Air and fuel consumption
- Volumetric and thermal efficiencies
- Willans line for a diesel engine

By using the recommended ancillaries and engine choices, students can investigate more features including:

- Plotting p - θ and p - V diagrams
- Engine cycle analysis
- Indicated mean effective pressure
- Indicated power
- Comparison of brake and indicated mean effective pressures
- Mechanical efficiency of the engine

The bed sits on a trolley for portability. It includes a robust, precision-machined, trunnion-mounted hydraulic dynamometer. The dynamometer applies load according to the flow rate and level of water in the casing. An accurate needle valve controls the flow rate and level. An electronic load cell measures torque. The engines (available separately) are supplied pre-mounted on a sturdy precision base plate. When the engine is initially mounted onto the test bed or exchanged with an alternative engine, dowels and slots locate the engine quickly, accurately and reliably. To enable students to measure air flow, an air-box and orifice plate are located underneath the engine bed on the trolley.

AVAILABLE EXPERIMENT MODULES:

- Four-Stroke Petrol Engine (TD201 or TD211) 272 /274
- Four-Stroke Diesel Engine (TD202 or TD212) 273 /275

ESSENTIAL ANCILLARIES:

- Manual Volumetric Fuel Gauge (AVF1) or 281
- Automatic Volumetric Fuel Gauge with Digital Read-Out (DVF1) 281

RECOMMENDED ANCILLARIES:

- Versatile Data Acquisition System – Frame-mounted version (VDAS-F) 299

ALTERNATIVE PRODUCTS:

- Regenerative Engine Test Set (TD300) 276

FOUR-STROKE PETROL ENGINE

TD201

A four-stroke, single-cylinder petrol engine for use with TecQuipment's Small Engine Test Set (TD200).

- High-quality yet cost-effective engine specially modified for educational use
- Wide range of investigations possible
- Quickly and accurately mounts on the test bed
- Includes colour-coded fuel tank with quick-release couplings

